

Ser. No. 09/443,401

2

10991745-1

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-7 (Cancelled)

8. (Currently Amended) ~~The substrate structure of Claim 13~~ A machine-readable Indicia-bearing substrate structure, comprising:

a substrate having a first surface and a second surface;

a first information bearing indicia defined by a fluorescent material positioned adjacent to the first surface;

a second information bearing indicia defined by a fluorescent material positioned adjacent to the second surface; and

means for preventing interference between a first fluorescing signal emitted by the first indicia and a second fluorescing signal emitted by the second indicia during a detection process for reading information from said first indicia or said second indicia, in which detection process the substrate structure is illuminated by illumination energy of a predetermined wavelength or wavelength range which causes said fluorescent material to fluoresce, said means including a reflective layer structure positioned between the first indicia and the second indicia, said reflective layer structure having sufficient thickness and opaqueness to prevent passage therethrough of said first fluorescing signal and said second fluorescing signal and to reflect said illumination energy;

wherein the substrate is a print medium, and the indicia are applied to a portion of the print medium which does not receive printed components of an image during a printing process; and

Ser. No. 09/443,401

3

10991745-1

wherein the substrate comprises first and second thin layers of a substrate material, and said reflective layer structure includes a reflective layer sandwiched between the first thin layer and the second thin layer.

Claims 9-14 (Cancelled)

15. (Previously Presented) A print medium encoded with information bearing indicia, comprising:

a layer of a print medium;

an indicia-bearing tape structure adhered to said layer of the print medium, said tape structure comprising:

a tape substrate having a first surface and a second surface;

a first information bearing indicia defined by a fluorescent material positioned adjacent the first surface;

a second information bearing indicia defined by a fluorescent material positioned adjacent the second surface; and

a reflective barrier structure for preventing interference between a first fluorescing signal emitted by the first indicia and a second fluorescing signal emitted by the second indicia during a detection process in which the substrate is illuminated by illumination energy of a predetermined wavelength or wavelength range which causes said fluorescent material to fluoresce, said reflective barrier structure of sufficient opacity and reflectiveness to prevent passage therethrough of said first fluorescing signal and said second fluorescing signal and to reflect said illumination energy.

16. (Previously Presented) The print medium of Claim 15 wherein the reflective barrier structure includes a thin metal foil layer positioned between the first indicia and the second indicia.

Ser. No. 09/443,401

4

10991745-1

17. (Previously Presented) The print medium of Claim 15 wherein the reflective barrier structure includes a reflective layer positioned between the first and second indicia.

18. (Currently Amended) The print medium of Claim 15 wherein the reflective barrier structure comprises one or more of the following materials:

Titanium (IV) Oxide (TiO₂), Zinc Oxide (ZnO), Zirconium (IV) Oxide (ZrO₂), aluminum oxide (Al₂O₃), aluminum oxide hydroxide (AlO(OH)), aluminum trihydroxide (Al(OH)₃).

19. (Cancelled)

20. (Previously Presented) The print medium of Claim 15 wherein the reflective barrier structure includes:

a first layer of a reflective disposed on the first surface of the tape substrate, the first indicia disposed on an outer surface of the first layer; and

a second layer of a reflective disposed on the second surface of the tape substrate, the second indicia disposed on an outer surface of the second layer.

21. (Previously Presented) The print medium of Claim 15 wherein the reflective barrier structure includes reflective radiation blocking materials dispersed within the tape substrate.

22. (Previously Presented) The print medium of Claim 15 wherein the tape substrate comprises first and second thin layers of a tape material, and the reflective barrier structure includes a reflective layer sandwiched between the first thin layer and the second thin layer.

23. (Original) The print medium of Claim 15 wherein the tape substrate is fabricated from a material selected from the group consisting of:
paper, polyester, polyethylene and polystyrene.

Ser. No. 09/443,401

5

10991745-1

24. (Original) The print medium of Claim 15 wherein said fluorescent material is a material which fluoresces energy at a wavelength within the spectral region between 200 and 1100 nanometers upon excitation by excitation radiation.

25. (Original) The print medium of Claim 15 wherein the first indicia and the second indicia are arranged in an overlapping relationship.

26. (Original) The print medium of Claim 15 wherein the layer of the print medium is a layer of a transparent or clear print material.

27. (Original) The print medium of Claim 15 wherein the layer of the print medium is in sheet form.

28. (Original) The print medium of Claim 15 wherein the layer of the print medium is in roll form.

Claims 29-37 (Canceled)